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September 18, 1997

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SEP 24 1997

Ms. Regina Keeney
Chief, Common Carrier Bureau
Federal Communications Commission
1919 M Street, N.W. Room 500
Washington, D.C. 20554

FEDERAL COMMUNICATIONS COMMISSION
OFFICE OF THE SECRETARY

Re: Week 5 Illinois FCC LNP Field Test

Dear Ms. Keeney:

Attached is the fifth weekly update from the Illinois FCC LNP Field Test Coordinator, Dick Dowd. I apologize for the lateness of this weekly report. The necessary information was not fully available until Tuesday of this week. Much of last week was spent trying gain and regain associations with the NPAC. This is an important issue and is being addressed this week and will continue to be addressed into next week.

If you have any questions on the testing or the summary, please call me at 312-814-6025.

Sincerely,

Brent A. Struthers

cc. Steven Teplitz

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**Illinois FCC LNP Field Test
Week 5 Summary**

Summary

Week 5 of the Illinois FCC LNP Field Test (Field Test) concentrated on completing the second round of porting numbers and brought a new LNP service provider into the FCC Field Test in an area that is already open to portability. Just prior to this second round of porting and continuing into week 5 a series of outages were experienced. These outages have slowed the progress of the FCC Field Test. Service provider number 5 has not been able to complete porting in of their telephone numbers due, in large part, to the various outages experienced this week. For this reason, the service providers were asked to detail connectivity problems experienced over the last two weeks. Individual service provider responses are included in the report below.

The FCC Field Test remains on schedule for call through testing for three of the original four participant's. The fourth original service provider has made progress with call through testing, but was hampered slightly by the outages experienced last week. The fifth participant has not completed the porting in of telephone numbers due in part to connectivity problems between their LSMS/SOA and the NPAC. Connectivity resolution is now the highest priority item for next week's activities.

NPAC Incident Report

Network Interruption 9/4/97 - 9/5/97

The network connectivity interruption between the Midwest NPAC Field Test System and the participating Service Providers has been investigated by NPAC personnel. The results of the investigation are provided for your information and are as follows:

Cause of the Interruption

The interruption is attributed to human error and violation of NPAC Procedures.

On 9/3/97, after the close of daily operations, a Network Engineer moved a piece of network interface equipment from its existing rack location to a new rack location. This move required the uncabing of the equipment. The engineer then performed tests which indicated that all was in order and left for the day.

At the start of business 9/4/97 it was discovered that network connectivity to all service providers had been lost. This loss of connectivity is directly related to the movement of cables in and around the equipment which was moved.

Procedure Review

Well defined NPAC procedures are in place governing the planning and execution of equipment maintenance and movement requiring planning, approval and notification. These procedures were not followed. Procedures for responding to such situations also have been reviewed and we find that some additions and clarifications are required with

respect to notification and escalation. These modifications are being incorporated.

Disposition

The Network Engineer has been re-assigned. Procedures are being modified as required. Network circuits and components are being correctly configured by the service providers to ensure that secondary circuits can be quickly activated via the BGP-4 Dynamic Routing Protocol.

Individual SP reports.

Service Provider "A" Report

SP-A participant reports having completed the porting in and out of TNs between SP-A and the other service providers with the exception of one number.

Last week SP-A experienced a 2 day outage from the local SOA and LSMS to the NPAC. This outage occurred on Thursday and Friday, September 4th and 5th. The outage was caused by unscheduled off hour work performed by NPAC personnel (see NPAC report). SP-A's inability to re-establish connectivity was due to internal network firewall security procedures. SP-A is currently re-examining internal processes and establishing new procedures to correct these problems. In addition SP-A's network organization will be meeting with the NPAC to establish a clear understanding of the required network connectivity and disaster recovery requirements of the service providers.

SP-A experienced several outages this past week to the NPAC which interfered with the ability to fully participate in the FCC Field Trial. The majority of these problems were related to additional failover software SP-A was attempting to load this week. Unbeknownst to SP-A this software caused Oracle operating system problems which did not allow them to recover their system each morning. SP-A has discontinued this installation at this time.

SP-A's connectivity is fully restored and they do not anticipate further problems.

TEST CASES COMPLETED:

TEST CASE NO.	DATE	PASS/FAIL	COMMENTS
4.7.1	8/26	P	4 test calls made all passed
4.7.2	8/26	P	5 test calls made all passed
4.5.1.1.1	9/9	P	6 test calls made all passed
4.5.1.1.2	9/9	P	3 test calls made all passed
4.5.1.1.3	9/9	P	1 test call made
4.5.1.1.4	9/9	P	1 test call made
4.5.1.1.5	9/9	P	1 test call made
4.5.1.1.6	9/9	P	1 test call made
4.5.1.1.7	9/9	P	1 test call made
4.5.1.1.8	9/9	P	1 test call made
4.5.1.1.9	9/9	P	8 test calls made 3 passed
4.5.8.1.1	9/11	P	8 test calls made 7 passed
4.5.8.1.5	9/11	P	4 test calls made 3 passed
4.5.8.1.7	9/11	P	2 test calls made both passed
4.5.8.2.1	9/11	P	6 test calls made all passed
4.5.8.2.2	9/11	P	5 test calls made all passed

4.5.8.2.3

9/11

P

3 test calls made all passed

Service Provider "B" Report

Note* SP-B has completed call through testing. What remains for SP-B is continued testing of Operations Process Flows.

Summary: The second wave of porting continued to be an education process. Several human errors were made and problems with connectivity between SP-B's SMS and the NPAC caused the due date on two of the orders to slip. The human errors encountered with both waves of porting have proven to be a positive learning experience, and in no way affect the viability of LRN as the technology solution to Local Number Portability.

TEST CASE	DATE	PASS/FAIL	COMMENTS
4.4.1.1.1	9/08	P	While this porting test case completed successfully, the recipient LSP had an internal problem with the trunk group that was assigned. Once corrected, the test case passed. A typing mistake caused the problem.
4.3.4	9/12	P	This conflict resolution test case experienced a variety of problems including mismatched due dates, the donor LSP failing to issue a confirm port request, and finally, connectivity problems between both LSPs SMS and NPAC. The final result was the same, however, in the process, we tested a timer expiration with NPAC and learned many other lessons for porting.
4.4.1.1.1	9/12	P	This port test case was originally due 9/10, however, due to a mismatch of due dates and connectivity problems with NPAC and SMS, the due date was changed to 9/12.
4.4.2.1.1	9/08	P	This order was supposed to be a port for a DID range. As a result of a misunderstanding, SP-B failed to issue the LSR for the range of numbers. This test case was used to test the cancel process, so no major problem resulted from the misunderstanding.
4.4.2.1.1	9/12	P	

Service Provider "C" Report

SP-C participant reports completing the following for the Week Ending 9/12.

Note* SP-C has completed their call through testing. What remains for SP-C is operations process testing.

Test Case	Date	P/F	Comments
4.5.3.1	8-Sep-97	P	CLASS W/ SPRINT
4.5.3.2	8-Sep-97	P	CLASS W/ SPRINT
4.5.3.3	8-Sep-97	P	CLASS W/ SPRINT
4.5.3.4	8-Sep-97	P	CLASS W/ SPRINT
4.5.3.5	8-Sep-97	P	CLASS W/ SPRINT
4.5.3.6	8-Sep-97	P	CLASS W/ SPRINT
4.8.1.1.1	9-Sep-97	P	OP SVC RETEST
4.8.2.1.1	9-Sep-97	P	OP SVC RETEST
4.8.4.1.1	9-Sep-97	P	OP SVC RETEST
4.5.1.1.10	8-Sep-97	P	SECOND PORTING TEST
4.5.1.1.11	8-Sep-97	P	SECOND PORTING TEST
4.5.1.1.12	8-Sep-97	P	SECOND PORTING TEST
4.5.1.1.13	9-Sep-97	P	SECOND PORTING TEST
4.5.1.1.14	9-Sep-97	P	SECOND PORTING TEST
4.5.1.1.15	9-Sep-97	P	SECOND PORTING TEST

Service Provider "D" Report

Due to the many problems experienced this reporting period with the LNP provisioning and administrative porting processes, SP-D was unable to realize significant progress in the testing arena. Specifically, this is in reference to the test bed Number Portability Service Control Points "NP/SCP" being populated with the ported test numbers in a synchronized manner required to support an effective test effort. There were various reasons, such as, connections down between SOA/LSMS's and the NPAC, and associations lost to the NPAC. SP-D also had an internal problem with lost connectivity between the LSMS and the NP/SCP's. The problem turned out to be an incorrect IP address.

SP-D has been tracking SOA to NPAC and LSMS to NPAC availability since August 18, 1997. Data to date shows SOA to NPAC at 86% and LSMS to NPAC 79% availability, this will be unacceptable in a production environment.

IN SUMMARY: According to SP-D, if the problems experienced this week occur while in production the industry will be inflicting duration of service outages on customers. According to SP-D, while the technology appears sound at this point in the testing, the processes do not.

SP-D performed 26 regression tests during this reporting period to capture AMA data for billing reconciliation. SP-D has yet to conclude that LNP billing can be performed as required.

During the week of 9/8-12/97 SP-D completed 18 tests in the DMS-100 and 3 tests in the as follows:

DMS-100

4.5.1.1.10	-3 times
4.5.1.1.11	-3 times
4.5.1.1.12	-3 times
4.5.1.1.15	
4.5.1.1.17	
4.5.1.1.18	
4.5.1.1.19	
4.5.1.1.20	
4.5.1.1.26	-3 times

5ESS
4.5.1.1.11
4.5.1.1.15
4.5.1.1.17

SP-D has 52 tests remaining to be executed.

Service Provider "E" Report

SP-E reports a week of problems in the area of connectivity/ association with the NPAC. These problems made for very limited progress this week. During the porting process: SP-Es SOA databases were out of sync with the NPAC and the other service providers' SOAs. This was due in part to SP-E's problems and problems encountered by the other service providers, several of which also experienced connectivity/ association problems at various times. This did, however, provide some real life testing scenarios.

On Wednesday 9/10, The NPAC experienced an interruption of service which was traced to their router. SP-E then checked their databases to determine if there were any changes to be made, none were necessary. SP-E then worked with the NPAC to resolve the problem. Researching the problem it was found that there was a power outage of some kind experienced by the NPAC over the week end. The circuit was recovered using a different router. Later, they fell back to the old router not realizing that the old router which had an incorrect route that they tried to use for disaster recovery. This means that their router thought there was a duplicate route and would not pass data across the link. The resolution was for SP-E to have to change IP Addressing. NPAC personnel are logging a call with Ascend in an effort to determine why their router did not flush the route. Problem resolved at 12:00 CDT.

On 9/11 there was a major fiber cut which caused SP-E to lose connectivity with the NPAC. As of 9/12 at 12:30 pm, the ASMS was operational again. The SP-E SOA database was brought in sync with the NPAC at 2:30 CDT. Thereafter, all outstanding subscriptions were entered. Number porting processes were complete at 5 pm with the exception of a number not ported in from SP-D.

Testing Status:

Test Case	Date	P/F	Comments
n/a	9-2	P	4 pre-porting 911 test cases
4.4.2.1.1	9-9	P	
4.3.4	9-12	P	
4.4.1.1.1	9-12	P	